

WHAT IS CLAIMED IS:

1. A zoom lens system comprising, in order from an object side to an image side:

5 a first lens unit having negative optical power;

a second lens unit having positive optical power, said second lens unit consisting of, in order from the object side to the image side, a first positive lens element having an aspherical surface,  
10 and a cemented lens formed by cementing a second positive lens element and a negative lens element having an aspherical surface; and

a third lens unit having positive optical power;

15 wherein during zooming operation of said zoom lens system, a distance between said first lens unit and said second lens unit is smaller at a telephoto end than at a wide-angle end, and a distance between said second lens unit and said third lens unit is  
20 changed, and during zooming operation of said zoom lens system from the wide-angle end to the telephoto end, said second lens unit is moved toward the object side.

25 2. A zoom lens system according to claim 1, wherein an absolute value of optical power of said aspherical surface of said first positive lens

element in said second lens unit is larger than an absolute value of optical power of a face facing said aspherical surface of said first positive lens element.

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3. A zoom lens system according to claim 1, wherein a condition of  $0.7 < D2a1/fw < 1.1$  is satisfied, where  $D2a1$  is an on-axis distance between said two aspherical surfaces in said second lens unit, and  $fw$  is a focal length of an entire system at the wide-angle end.

4. A zoom lens system according to claim 1, wherein a condition of  $17 < (v_{p-1} + v_{p-2})/2 - v_n < 25$  is satisfied, where  $v_{p-1}$  is an Abbe number of material of said first positive lens element in said second lens unit,  $v_{p-2}$  is an Abbe number of material of said second positive lens element in said second lens unit, and  $v_n$  is an Abbe number of material of said negative lens element in said second lens unit.

5. A zoom lens system according to claim 1, further comprising an aperture stop, said aperture stop being moved together with said second lens unit during zooming operation, wherein said aspherical surface in said second lens unit is provided on a face of said negative lens element on the image side,

and a condition of  $0.5 < R_{n1}/D_{2sp1} < 1.1$  is satisfied, where  $R_{n1}$  is a paraxial radius of curvature of said aspherical surface provided in said negative lens element, and  $D_{2sp1}$  is an on-axis  
5 distance between said aperture stop and said aspherical surface provided in said negative lens element.

6. A zoom lens system according to claim 1,  
10 further comprising a fourth lens unit having positive optical power, said fourth lens unit being disposed on the image side of said third lens unit, wherein during zooming operation from the wide-angle end to the telephoto end, said third lens unit is moved  
15 toward the object side, and said fourth lens unit does not move for zooming operation.

7. A zoom lens system according to claim 1, wherein said first lens unit includes a negative lens  
20 element disposed on a side of said first lens unit closest to the object.

8. A zoom lens system according to claim 1, wherein said first lens unit consists of a single  
25 negative lens element, and a single positive lens element in order from the object side to the image side.

9. A zoom lens system according to claim 1, wherein said zoom lens system forms an image on a photosensitive face of a solid-state pick-up device.

5           10. A zoom lens system comprising, in order from an object side to an image side:

          a first lens unit having negative optical power;

          a second lens unit having positive optical  
10 power, said second lens unit consisting of, in order from the object side to the image side, a first positive lens element having an aspherical surface, and a cemented lens having an aspherical surface, said cemented lens being formed by cementing a second  
15 positive lens element and a negative lens element;  
and

          a third lens unit having positive optical power;

          wherein during zooming operation of said zoom  
20 lens system, a distance between said first lens unit and said second lens unit is smaller at a telephoto end than at a wide-angle end, and a distance between said second lens unit and said third lens unit is changed; during zooming operation of said zoom lens  
25 system from the wide-angle end to the telephoto end, said second lens unit is moved toward the object side; and a condition of  $0.7 < D2a1/fw < 1.1$  is

satisfied, where  $D2a1$  is an on-axis distance between said two aspherical surfaces in said second lens unit, and  $fw$  is a focal length of an entire system at the wide-angle end.

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11. A zoom lens system according to claim 10, wherein said zoom lens system forms an image on a photosensitive face of a solid-state pick-up device.

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12. A zoom lens system comprising, in order from an object side to an image side:

a first lens unit having negative optical power;

15 a second lens unit having positive optical power, said second lens unit consisting of three lens elements having at least two aspherical surfaces; and

a third lens unit having positive optical power;

20 wherein during zooming operation of said zoom lens system, a distance between said first lens unit and said second lens unit is smaller at a telephoto end than at a wide-angle end, and a distance between said second lens unit and said third lens unit is changed; during zooming operation of said zoom lens  
25 system from the wide-angle end to the telephoto end, said second lens unit is moved toward the object side; and a condition of  $0.7 < D2a1/fw < 0.95$  is

satisfied, where  $D_{2a1}$  is an on-axis distance between said two aspherical surfaces in said second lens unit, and  $f_w$  is a focal length of an entire system at the wide-angle end.

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13. A zoom lens system according to claim 12, wherein said zoom lens system forms an image on a photosensitive face of a solid-state pick-up device.

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14. A zoom lens system comprising, in order from an object side to an image side:

a first lens unit having negative optical power;

a second lens unit having positive optical power, said second lens unit consisting of three lens elements, and two aspherical surfaces being provided on a convex face and a concave face of two different lens elements in said three lens elements, respectively; and

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a third lens unit having positive optical power;

wherein during zooming operation of said zoom lens system, a distance between said first lens unit and said second lens unit is smaller at a telephoto end than at a wide-angle end, and a distance between said second lens unit and said third lens unit is changed; and during zooming operation of said zoom

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lens system from the wide-angle end to the telephoto end, said second lens unit is moved toward the object side.

5           15. A zoom lens system according to claim 14,  
wherein said aspherical surface provided on said  
convex face is disposed on a side closest to the  
object in said second lens unit, and said aspherical  
surface provided on said concave face is disposed on  
10 a side closest to the image in said second lens unit.

          16. A zoom lens system according to claim 14,  
wherein said zoom lens system forms an image on a  
photosensitive face of a solid-state pick-up device.  
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          17. An image pick-up apparatus comprising:  
a zoom lens system recited in claim 1; and  
a solid-state pick-up device for receiving an  
image formed by said zoom lens system.  
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          18. An image pick-up apparatus comprising:  
a zoom lens system recited in claim 10; and  
a solid-state pick-up device for receiving an  
image formed by said zoom lens system.  
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          19. An image pick-up apparatus comprising:  
a zoom lens system recited in claim 12; and

a solid-state pick-up device for receiving an  
image formed by said zoom lens system.

20. An image pick-up apparatus comprising:
- 5     a zoom lens system recited in claim 14; and
- a solid-state pick-up device for receiving an  
image formed by said zoom lens system.